

ABSTRACT

2 A reactor module for use in a compact fuel processor having a module inlet for
3 receiving a feed stream, a module outlet for producing an effluent stream, a reactor
4 having a reactor inlet, a reactor outlet, and catalyst, an inlet spiral passage in fluid
5 communication with the module inlet to the reactor inlet, and an outlet spiral passage in
6 fluid communication with the reactor outlet to the module outlet. Such a design provides
7 for the feed stream to be introduced to the module inlet, where it then passes through the
8 inlet spiral passage, and is heated by hot reactor product passing through the outlet spiral
9 passage. The reactor may be any type of fixed bed exothermic containing supported
10 catalyst particles or the reactor bed may be a monolith with catalytic material coated on
11 to the surface of the structural members.

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